Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (previously presented) A system for finding a target, comprising:

a transponder disposed on the target;

a transceiver for monitoring the location of the target;

a wireless communication system configured to allow communication between said transponder and said transceiver, and a processor configured to find the target by virtual triangulation that does not use a fixed infrastructure and based on values of position information from said transponder and said transceiver.

2. (previously presented) The system of claim 1, wherein said processor is configured to determine virtual triangulation based on successive values of said position information using at least three points P_1, P_2 and P_3 and using a pattern search to determine a direction and a distance to the transponder respective of said transceiver.

3. (previously presented) The system of claim 1, wherein said processor is configured to determine virtual triangulation based on successive values of said position information of said transponder respective of said transceiver using a means for successive pattern movement technique configured to find the target,

whereby said means for successive pattern movement obtains and corrects the direction and distance to the location of the target T based on said values of said position information.

4. (previously presented) The system of claim 1, wherein said processor is configured to determine virtual triangulation based on successive values of said position information relating to the average speed of the motion of the user of said transponder respective of said transceiver.

5. (previously presented) The system of claim 1, wherein said processor is configured to determine virtual triangulation based on successive values of said position information relating to input of a user of said transceiver,

whereby said user input corresponds to motion of said transponder respective of said transceiver .

6. (previously presented) The system of claim 1, wherein said processor is configured to determine virtual triangulation based on successive values of the elapsed time of a ranging signal transmitted by said transceiver to said transponder, said transponder transmitting a reply ranging signal to said transceiver,

whereby said transceiver transmitting said ranging signal and receiving said reply ranging signals from said transponder a predetermined number of times sufficient to determine an elapsed time based on a time-of-flight of said ranging signal.

7. (previously presented) The system of claim 1, wherein said processor is configured to accumulate a phase shift between said ranging signal and said reply ranging signal.

8. (previously presented) The system of claim 1, wherein said processor is configured with a phase shift detector.

9. (previously presented) The system of claim 8, wherein said processor is configured to determine a value of an optimal operating resolution of said phase shift detector.

10. (previously presented) The system of claim 8, wherein said phase shift detector is configured to measure a value of said phase shift between said ranging signal and said reply ranging signal.

11. (previously presented) The system of claim 8, wherein said processor configured to determine a value of said phase shift based on a value of a transmission interval.

12. (previously presented) The system of claim 8, wherein said processor configured to determine a value of said phase shift based on a value of a calibration interval.

13. (previously presented) The system of claim 12, wherein said value of said calibration interval is periodically determined by each of said transponder and or said transceiver.

14. (previously presented) The system of claim 8, wherein said processor determines said phase shift based on a value of an antenna propagation interval.

15. (previously presented) The system according to claim 1, wherein said transceiver is configured to enter a homing mode for searching for the target, said homing mode being entered when a value of said position information between said transceiver and the target corresponds to a predetermined value.

16. (previously presented) The system according to claim 15, wherein said homing mode is toggled between states of ON and OFF by a value of said position information of the target being equal to a predetermined value of a position ambiguity of the target.

17. (original) The system according to claim 16, wherein said transceiver is configured to exit said homing mode after an elapsed predetermined time period.

18. (original) The system according to claim 16, wherein said transceiver is configured to enter said homing mode to determine a location of the target when requested by input from a user.

19. (original) The system according to claim 1, wherein said processor is configured to reduce position ambiguity of transceiver respective of the target based on generating a value for input information signals on at least one band.

20. (original) The system according to claim 19, wherein said transceiver is configured to generate auditory signals representative of when said position ambiguity of the target is equal to a predetermined value for said position ambiguity.

21. (previously presented) The system according to claim 1, wherein said processor is configured to operate on a band using a spread spectrum to establish position information signals from said transponder and said transceiver.

22. (previously presented) The system according to claim 1, wherein said transceiver is configured with an interface so as to communicate to the user through said interface by one or more of the sensing group of audible, visual or physical signals.

23. (original) The system according to claim 22, wherein said interface includes a display for visually displaying said position information to the user.

24. (previously presented) The system according to claim 23, wherein said display includes is LCD screen for indicating said position information to the user.

25. (previously presented) The system according to claim 22, wherein said interface includes an indicator configured to display said position information to the user on a predetermined pattern.

26. (original) The system according to claim 2, wherein said values from said three points P_1, P_2 and P_3 create a point of intersection of circles based on circles with radii R_1, R_2 and R_3 originating from said points P_1, P_2 and P_3, respectively,

whereby said point of intersection finds the target respective of said transceiver.

27. (original) The system according to claim 1, wherein said transceiver is configured to adjust adaptively a power value of a transmitter of said transceiver so as to improve a value of said position information.

28. (original) The system according to claim 1, wherein said transceiver is configured to adjust adaptively a sensitivity value of a receiver of said transceiver so as to improve a value of said position information.

29. (original) The system according to claim 1, wherein said transponder is configured to adjust adaptively a power value of a transmitter of said transponder so as to improve a value of said position information.

30. (original) The system according to claim 1, wherein said transponder is configured to adjust adaptively a sensitivity value of a receiver of said transponder so as to improve a value of said position information.

31. (previously presented) The system according to claim 1, wherein said transceiver includes a processor configured to be in communication with an antenna, said processor being configured to repeatedly determine values for said position information based on one or more of the following values for:

a transmission interval between said transceiver and said transponder, said transmission interval being an elapsed time between transmitting said ranging signal and receiving said reply ranging signal,

a calibration interval between each of said transceiver and transponder said calibration interval being a time interval of a period to normalize the circuitry of said transponder and said transceiver, and

an antenna propagation interval of either of said transceiver or said transponder, or both, said antenna propagation interval being an elapsed time of a signal measured as it passes through said antenna of said transponder or said transceiver.

32. (previously presented) The system according to claim 1, wherein said transceiver is configured for communication with an antenna to repeatedly determine values for said position information based on a value for a measured distance between said transponder and said transceiver.

33. (previously presented) The system according to claim 1, wherein said transceiver is configured for transmitting a ranging signal to said transponder, said transponder is configured for responding to said ranging signal by transmitting a reply ranging signal to said transceiver, and said transceiver is configured to determine a value of a measured distance between said transponder and said transceiver based on position information from said ranging signal and said reply ranging signal.

34. (previously presented) A method, comprises the steps of:

determining a value of a point P_1 from position information received by a transceiver corresponding to a location of a transponder disposed on a target;

prompting a user to move said transceiver to a point P_2 relative to a location of the target;

determining a value of a point P_2 from position information received by said transceiver corresponding to a location of said transponder;

prompting said user to move said transceiver to a point P_3 relative to a location of the target;

determining a value of a point P_3 from position information received by said transceiver corresponding to a location of said transponder; and

finding the location of the target by virtual triangulation based on the values for said points P_1, P_2 and P_3 .

35. (previously presented) The method of claim 34 wherein said step of determining said position information further comprises repeating as necessary the steps of:

prompting the user to move said transceiver to a point P_n relative to a location of said target having said transponder;

determining a value of a point P_n from position information received by said transceiver corresponding to a location of said transponder; and

finding the location of the target from position information received by said transceiver by repeating said determining by virtual triangulation for two of each of said values for said points P_1, P_2 or P_3 and said point P_n.

36. (original) The method of claim 34 wherein said step of determining said position information further comprises the steps of:

determining said values of said position information of said target by:

determining a transmission interval between said transceiver and said transponder;

determining a calibration interval between each of said transceiver and transponder; and

determining an antenna propagation interval of each of said transceiver and transponder.

37. (original) The method of claim 36 wherein said step of determining said position information further comprises the steps of:

determining said transmission interval based on an elapsed time between transmitting said ranging signal and receiving said reply ranging signal.

38. (original) The method of claim 36 wherein said step of determining said position information further comprises the steps of:

determining said calibration interval based on a time interval of a period to normalize the circuitry of said transceiver and said transponder.

39. (original) The method of claim 36 wherein said step of determining said position information further comprises the steps of:

determining said antenna propagation interval based on an elapsed time of a signal measured passing through said antenna of said transceiver and said transponder.

40. (original) The method of claim 36 wherein said step of determining said position information further comprises the steps of:

generating a measured distance between each of said transceiver and said transponder.

41. (previously presented) The method of claim 40 wherein said step of determining said measured distance further comprises the steps of:

determining said position information of the target generated by a virtual triangulation relationship when successive values of said position information have a predetermined logical relationship relative to said previous values between said transceiver and said transponder.

42. (original) The method of claim 36 wherein said step of determining said position information further comprises the steps of:

generating a measured distance between each of said transceiver and said transponder.

43. (canceled)

44. (canceled)

45. (canceled)

46. (canceled).

47. (currently amended) A portable device for tracking a target, comprising:

processor for determining position information of the target, memory ~~operabaly~~ operably connected to said processor, said memory being configured to store a plurality of sequences of instructions, said plurality of sequences of instructions including sequences of instructions which, when executed by said processor, cause said processor to perform the steps of:

determining a value of a point P_1 from position information received by a transceiver corresponding to a location of a transponder disposed on a target;

prompting said user to move said transceiver to a point P_2 relative to a location of the target;

determining a value of a point P_2 from position information received by said transceiver corresponding to a location of said transponder;

prompting said user to move said transceiver to a point P_3 relative to a location of the target;

determining a value of a point P_3 from position information received by said transceiver corresponding to a location of said transponder; and

finding the location of the target by virtual triangulation in accordance with each of said values for said points P_1, P_2 and P_3 of position information received by said transceiver.

48. (original) The portable device of claim 47 wherein said processor further repeating as necessary the steps of:

prompting a user to move said transceiver to a point P_n relative to a location of said target having said transponder;

determining a value of a point P_n from position information received by said transceiver corresponding to a location of said transponder; and

finding the location of the target from position information received by said transceiver by repeating said determining by virtual triangulation for two of each of said values for said points P_1, P_2 or P_3 and said point P_n.

49. (original) The portable device of claim 47 wherein said processor further executing the steps of:

determining said values of said position information of said target by: determining a transmission interval between said transceiver and said transponder;

determining a calibration interval between each of said transceiver and transponder; and

determining an antenna propagation interval of each of said transceiver and transponder.

50. (original) The portable device of claim 49 wherein said processor further executing the steps of:

determining said transmission interval based on an elapsed time between transmitting said ranging signal and receiving said reply ranging signal.

51. (original) The portable device of claim 49 wherein said processor further executing the steps of:

determining said calibration interval based on a time interval of a period to normalize the circuitry of said transceiver and said transponder.

52. (original) The portable device of claim 49 wherein said processor further executing the steps of:

determining said antenna propagation interval based on an elapsed time of a signal measured passing through said antenna of said transceiver and said transponder.

53. (original) The portable device of claim 49 wherein said processor further executing the steps of:

generating a measured distance between each of said transceiver and said transponder.

54. (original) The portable device of claim 53 wherein said processor further executing the steps of:

determining said position information of the target generated by a Virtual triangulation relationship when successive values of said position information have a predetermined logical relationship relative to said previous values between said transceiver and said transponder.

55. (previously presented) A mobile system for tracking a target T, comprising:

a transponder unit disposed on the target T;

a monitoring unit for monitoring the location of the target T;

a wireless communication system operating on at least one Radio Frequency (RF) band, said wireless communication system being configured to allow communication between at least two monitoring units and the target T, and a processor configured to find the target T by virtual triangulation that does not use a fixed infrastructure and based on values of position information from said monitoring unit and said transponder unit disposed on the target T.

56. (original) The mobile system according to claim 55, wherein said processor being configured to be in communication with an antenna, said processor being configured to repeatedly determine values for said position information from: a transmission interval between said monitoring unit and the target T, a calibration interval between each of said monitoring unit and the target T, and an antenna propagation interval of said monitoring unit and the target T.

57. (original) The mobile system according to claim 56, wherein further comprising:

means for generating values of a measured distance between units, said generating means determining said values of said measured distance between said monitoring unit and the target T based on a virtual triangulation relationship using said position information.

58. (original) The mobile system according to claim 57, wherein said processor being configured to be in communication with an antenna, said processor being configured to repeatedly determine values for said position information from:

a transmission interval between said monitoring unit and the target T,

a calibration interval between each of said monitoring unit and the target T, and

an antenna propagation interval of said monitoring unit and the target T.

59. (previously presented) The mobile system according to claim 56, wherein said transmission interval is an elapsed time between transmitting said ranging signal and receiving said reply ranging signal.

60. (previously presented) The mobile system according to claim 56, wherein said calibration interval is a time interval of a period to normalize the circuitry of said monitoring unit and the target T.

61. (previously presented) The mobile system according to claim 56, wherein said antenna propagation interval is an elapsed time of a signal measured as it passes through said antenna of said monitoring unit and the target T.

62. (previously presented) The mobile system according to claim 56, wherein said system is configured to generate said virtual triangulation from said position information from a plurality of monitoring units or transponder units disposed on the target T.

63. (previously presented) The mobile system according to claim 56, further comprising a plurality of monitoring units being configured to generate said virtual triangulation from said position information based on values received from said monitoring unit, or said transponder units disposed on the target T, or transponder units adjacent the target T.

64. (previously presented) The mobile system according to claim 63, whereby said monitoring unit or said transponder units disposed on the target T or units adjacent the target T, are linked dynamically so as to form a mobile network adapted to locate, track and determine the position of each of said plurality of units.

65. (previously presented) The mobile system according to claim 64, wherein said mobile network is configured to enable a coordinated search to intercept the target T.

66. (previously presented) The mobile system according to claim 65, wherein said monitoring unit of said mobile network is configured having an indicator means adapted to illustrate to each of said monitoring units in a predetermined range, and said indicator means is configured to instruct respective monitoring units to move coordinately so as to converge on said target T based on said position information determined by said virtual triangulation relationship.

67. (original) The mobile system according to claim 56, wherein said position information determines values for three points P_1, P_2 and P_3 so as to create a point of intersection of circles with radii R_1, R_2 and R_3 originating from said points P_1, P_2 and P_3, respectively,

whereby said point of intersection finds the target respective of each of said monitoring units.

68. (previously presented) The mobile system according to claim 56, wherein said processor is configured to determine virtual triangulation based on successive values of said position information using at least three points P_1, P_2 and P_3 of said monitoring unit respective of said transponder unit disposed on the target T.

69. (previously presented) The mobile system according to claim 56, wherein said processor is configured to determine virtual triangulation based on successive values of said position information of said transponder respective of said transceiver using a position ambiguity reduction (PAR) configured to find the target,

whereby said PAR obtains and corrects the direction to the location of the target T based on said values of said position information.

70. (previously presented) The mobile system according to claim 56, wherein said processor is configured to determine virtual triangulation based on successive values of said position information relating to the average speed of the motion of the user of said transponder unit respective of said monitoring unit.

71. (previously presented) The mobile system according to claim 56, wherein said processor is configured to determine virtual triangulation based on successive values of said position information relating to input of a user of said transceiver,

whereby said user input corresponds to motion of the slave unit respective of said monitoring unit .

72. (previously presented) The mobile system according to claim 56, wherein said processor is configured to operate on a band using a spread spectrum to establish position information signals from said slave unit respective of said monitoring unit.

73. (canceled).

74. (previously presented) A system for finding a target, comprising:

a tracked unit, said tracked unit being configured with a transponder and is disposed on the target;

a monitoring unit, said monitoring unit being configured with a transceiver, said monitoring unit configured for monitoring and tracking the location of the target;

a communication system configured to communicate between said transponder and said transceiver on radio frequency band, and whereby said monitoring device has means for generating a measured distance between said monitoring device and said tracked unit, said monitoring device has means for determining the monitoring and tracking of the location of the target by a virtual triangulation relationship without a need for additional points of reference and without a need for a fixed infrastructure.

75. (original) The system for finding the target of claim 74, wherein said monitoring unit moves in a virtual triangulation pattern where successive movements of said monitoring unit are based on logical, algorithmic and mathematical relationships between said measured distance values between said monitoring unit and said tracked unit.

76. (original) The system for finding the target of claim 74, wherein said monitoring unit includes means for generating a measured distance between locations of successive movements of said monitoring unit or between successive locations of said monitoring unit as input by the user.

77. (original) The system for finding the target of claim 76, wherein said monitoring unit moves in a virtual triangulation pattern where successive movements of said monitoring unit are based on logical, algorithmic and mathematical relationships between said measured distance values between said monitoring unit and said tracked unit, and said distance values between said monitoring unit successive locations.

78. (original) The system for finding the target of claim 77, wherein said monitoring unit generates visual and audio information prompts for said monitoring unit successive movement.

79. (original) The system for finding the target of claim 78, wherein said monitoring unit generates visual and audio information that conveys said monitoring unit successive movements and said target movements, and said monitoring unit and said target relative location as well the bearing angle to the target.

80. (original) The system for finding the target of claim 79, wherein said monitoring or tracked units are configured with GPS, compass or other position and/or direction determining devices.

81. (original) The system for finding the target of claim 80, wherein said monitoring unit generates visual and audio information that conveys said monitoring unit and the target successive movements, relative location and or absolute location.

82. (original) The system for finding the target of claim 80, wherein said monitoring unit generates visual and audio information that conveys said monitoring unit and the target successive movements, relative location and or absolute location.

83. (original) The system for finding the target of claim 74, wherein any three said monitoring units are stationary and are not located on the same straight line.

84. (original) The system for finding the target of claim 83, wherein said three stationary monitoring units can form a virtual system of coordinates in which the coordinates of the said three stationary monitoring units and the coordinates can be determined of all of the mobile monitoring units and targets that are within the communication range of said three stationary monitoring units.

85. (original) The system for finding the target of claim 84, wherein said mobile monitoring unit generates visual and audio information prompts for said monitoring unit successive movement.

86. (original) The system for finding the target of claim 85, wherein said mobile monitoring unit generates visual and audio information that conveys said virtual scaled coordinates together with said mobile monitoring unit and the target relative location, and successive movements of said mobile monitoring unit and said target, and said bearing angle

from said mobile monitoring unit to the target, and said stationary monitoring units relative location.

87. (original) The system for finding the target of claim 86, wherein the data processing is performed by any said monitoring unit, stationary or mobile, or in a distributed fashion.

88. (original) The system for finding the target of claim 87, wherein said monitoring and tracked units are combined with GPS, compass or other position and/or direction determining devices.

89. (original) The system for finding the target of claim 88, wherein each mobile or stationary monitoring unit is equipped with a compass.

90. (original) The system for finding the target of claim 74 whereby an ambiguity zone is decreased by increasing a distance between each of points P_1, P_2 and P_3, said distance is increased between two of said points P_1, P_2 or P_3 from an approximate value of 1.75*E to 4*E to reduce said ambiguity zone formed between each of said tracked units,

whereby E is a maximum error in said distance measured between two of said points P_1, P_2 or P_3, a width of said ambiguity zone is equal to E, and a length of said ambiguity zone is less than 2*E.

91. (original) The system for finding the target of claim 74,

whereby an ambiguity zone is reduced by increasing a distance between each of points P_1, P_2 and P_3, said distance is increased between two of said points P_1, P_2 or P_3 from an approximate value of 1.9*E to 5*E to reduce an ambiguity zone formed between each of said tracked units,

whereby E is a maximum error said distance measured between two of said points P_1, P_2 or P_3, a width of said ambiguity zone is equal to E, and a length of said ambiguity zone is less than 2*E.

92. (original) The system for finding the target of claim 91, whereby said system increases said distance measured between two of said points P_1, P_2 or P_3 to a large distance reduces said ambiguity zone to a square having sides equal to E.

93. (original) The system for finding the target of claim 74,

whereby said monitoring unit is configured with a loop back mode, said loop back mode utilizes a value representing a data processing time correction, said value for data processing time correction is determined by sending an output signal to the input of a receiver from an output of the transmitter of said monitoring unit,

whereby said processor of said monitoring unit sends test data to the input of an encoder and starts a timer, said processor receives said output signal from said input of said receiver and stops said timer, said processor compares said test data and said received signal for a validation, said processor computing a loop back elapsed time from said timer, and said processor further

corrects said loop back elapsed time by adding either of said validation or said data processing time correction, or both.

94. (original) The system for finding the target of claim 74, whereby said monitoring unit is configured with a loop back mode, said loop back mode utilizes an output signal sent from an output of a transmitter sent to an attenuator connected directly to the input of a receiver of said monitoring unit.

95. (original) The system for finding the target of claim 74, wherein said monitoring unit includes an interface for audio communications and telemetry information exchange so as to communicate between each of master units in the system simultaneously or independently from the operation of a processor regarding said distance measurement.

96. (original) The system for finding the target of claim 74, wherein an interface provides communications between said monitoring unit and said tracked unit in the system simultaneously or independently from the distance measurement operation.

97. (original) The system for finding the target of claim 96, whereby said interface provides full duplex audio communications and telemetry information exchange between said monitoring unit and said tracked unit, or between a plurality of said monitoring units in the system.

98. (previously presented) An integrated circuit for a wireless system for locating and tracking a subject or object, comprising:

a receiver;

a transmitter;

a microprocessor having a common clock as a source of synchronization;

whereby said receiver and transmitter together define an active transponder and the integrated circuit is preferably a monolithic single die integrated circuit including said receiver, said transmitter, and said microprocessor;

said transponder supplies predetermined ranging signals to a data processor portion of said microprocessor, said transponder includes an encoder for encoding data for transmission by said transmitter, and said a receiver includes a decoder circuit for receiving and decoding signals received from said antennae, and said a data processor for determining interval and position information, said data processor comprising a digital signal processor (DSP), a voltage stabilizer, and a battery supervisor; and

an antenna for propagating said ranging said signal.

99. (original) The circuit of claim 98, wherein said data information and ranging signals determined from input signals are coupled through a band pass filter, a distance measurement unit, and said decoder.

100. (original) The circuit of claim 99, further including a microphone coupled to an input of a summing amplifier through a low frequency amplifier, said low frequency amplifier

having compression/pre-emphasis, a low pass filter and an analog switch, said analog switch is operated by said DSP to enable a user to send voice communications when a monitoring or master unit is operating in a voice mode.

101. (previously presented) A method of a dynamic, mobile network for tracking and locating a plurality of monitoring units and targets T, comprising:

tracking a primary target T with a primary monitoring unit having a predetermined range;

determining when said primary target T moves out of said predetermined range;

sending a ranging signal to at least one secondary monitoring unit within said predetermined range;

receiving a reply ranging signal from at least one of said secondary monitoring unit;

sending a request for a list of identified targets T to said secondary monitoring unit within a range of said secondary monitoring unit;

receiving said list of identified targets T from said secondary monitoring unit;

comparing said list of identified targets T to said primary target T;

matching said primary target T to one of said list of identified targets T from said secondary monitoring unit; and

determining the location of the primary target from position information provided by said secondary monitoring unit.

102. (previously presented) The method of claim 101, further comprising the additional step of:

transferring tracking of said primary target to said secondary monitoring unit having said primary target in range.

103. (previously presented) A method for finding a target, comprising the steps of:

determining a point P_1 by having a user make an input to a monitoring unit;

transmitting a ranging signal from said monitoring unit;

receiving a reply ranging signal from a slave unit located on a subject or on an object at a point T, where said point T is located out of a range of said master unit;

entering a homing mode on said monitoring unit;

prompting said user to select a direction and having said user move in said direction along a path "Delta (1)" in a direction towards a point P_2;

actuating a step button on said monitoring unit to input once for each step taken by said user to generate reference points for a virtual triangulation calculation;

prompting said user through said master unit to stop data input of said step button when said user reaches said point P_2 determining using a processor of said monitoring unit whether the distance between subsequent points Delta (n) is equal or greater than (4-5)*E such that a value of said path Delta (1) is sufficiently large to minimize a position ambiguity of said point T.

104. (previously presented) The method for finding a target of claim 103, further comprising the step of:

prompting said user after reaching point P_1 randomly to go either right or left from said Point P_1 to a point P_2 in a direction away from said point T.

105. (previously presented) The method for finding a target of claim 104, further comprising the step of:

actuating a step button on said monitoring unit to input once for each step taken by said user going to point P_2 in a direction away from said point T to generate reference points for a virtual triangulation calculation.

106. (previously presented) The method for finding a target of claim 105, further comprising the step of:

prompting said user after reaching point P_2 randomly to go either right or left from said Point P_2 along a path "Delta (2)" to a point P_3 in a direction away from said point T.

107. (previously presented) The method for finding a target of claim 106, further comprising the step of:

actuating a step button on said monitoring unit to input once for each step taken by said user going to point P_3 in a direction away from said point T to generate reference points for a virtual triangulation determination.

108. (original) The method for finding a target of claim 107, further comprising the step of:

determining a Delta (n) using a current reference unit pre-programmed in said processor and calculating said Delta (n), which is equal to the difference (P(n-1)-current position).

109. (previously presented) The method for finding a target of claim 108, further comprising the step of:

prompting said user after determining said Delta (n) to move in a direction toward the point T.

110. (previously presented) The method for finding a target of claim 109, further comprising the step of:

prompting said user repeatedly along successive points $P_{(n)}$ in a direction toward the point T using virtual triangulation, and entering a homing mode upon approaching said target T after determining said Delta (n) to move in a direction toward the target T, wherein said master unit prompts said user.

111. (previously presented) The method for finding a target of claim 110, further comprising the step of: requesting said slave unit to generate an audible signal upon approaching said point T in said homing mode within a predetermined range, and generating an audible signal using said slave unit.

112. (previously presented) The method for finding a target of claim 111, further comprising the step of: requesting said slave unit to generate an audible signal upon approaching said target point T in said homing mode within a predetermined range, and generating an audible signal using said slave unit.

113. (previously presented) A method for finding a target, comprising the steps of:

determining a point P_1 by having a user make an input to a monitoring unit;

transmitting a ranging signal from said monitoring unit;

receiving a reply ranging signal from at least three stationary slave units located on subjects or on objects at a points T_1, T_2 and T_3 within a predetermined range of said monitoring unit,

whereby each of said points T_1, T_2 and T_3 form a set of virtual coordinates relative to said point P_1; and

determining a location of said monitoring unit relative to said slave units using triangulation of points T_1, T_2 and T_3 and said virtual coordinates relative to said point P_1.

114. (previously presented) The method for finding a target of claim 113, further comprising the step of: transmitting a ranging signal from said monitoring unit to said slave units;

receiving a reply ranging signal from each of said slave units; and

prompting said user when said slave is out of a range of said monitoring unit.

115. (previously presented) The method for finding a target of claim 114, further comprising :

entering a homing mode on said monitoring unit;

prompting said user to select a direction and having said user move in said direction along a path "Delta (1)" in a direction towards a point P_2;

determining a Delta (n) using a current reference unit pre-programmed in said processor and calculating said Delta (n), which is equal to the difference (P(n-1)-current position); and

prompting said user after determining said Delta (n) to move in a direction toward the point P_1.

116. (previously presented) A method for finding a target, comprising the steps of:

transmitting a ranging signal from a searching monitor unit M_S;

receiving a reply ranging signal from at least three stationary slave units located on subjects or on objects at a points P_1, P_2 and P_3 within a predetermined range of said searching monitor unit M_S,

whereby each of said points P_1, P_2 and P_3 form a set of virtual coordinates relative to said point P_1;

determining said points P_1 and P_2 relative to said searching monitor unit M_S having virtual coordinates X and Y using a processor of said searching monitor unit M_S;

determining a location of a mobile slave unit disposed on a subject forming a tracked target T, said target T having virtual coordinates are T_y and T_x;

determining a location of said searching monitor unit M_S relative to said tracked target T using said virtual coordinates formed by said stationary slave units and said virtual coordinates are M_{Sxy} and S_{my} for said searching monitor unit M_S.

117. (previously presented) The method for finding a target of claim 116, further comprising the step of:

determining a location of three stationary master units M_1, M_2 and M_3,

whereby said master unit M_1 is separated from said master unit M_2 by a distance D_{12}, said master unit M_1 is separated from said master unit M_3 by a distance D_{13}, said master unit M_2 is separated from said master unit M_3 by a distance D_{23}.

118. (previously presented) The method for finding a target of claim 117, further comprising the step of: determining a distance Ms_R_1, Ms_R_2 and Ms_R_3 between said searching monitor unit Ms and said master units M_1, M_2 and M_3, respectively.

119. (previously presented) The method for finding a target of claim 118, further comprising the step of: determining a distance T_R_1, T_R_2 and T_R_3 between said target T and said master units M_1, M_2 and M_3, respectively.

120. (previously presented) The method for finding a target of claim 119, further comprising the step of: determining position ambiguity between said master units M_1, M_2 and M_3 and said distances D_{12}, D_{13} and D_{23} so as to minimize ambiguity error between said target T distances T_R_1, T_R_2 and T_R_3 and said master units M_1, M_2 and M_3, respectively.

121. (previously presented) The circuit of claim 120, wherein said data information and ranging signals determined from input signals are coupled through a band pass filter, a distance measurement unit, and said decoder.

[[121.]] <u>122.</u> (currently amended) The system of claim 1, wherein the target is stationary.

[122.] <u>123.</u> (currently amended) The system of claim 1, wherein the target is a moving target.

[[123.]] <u>124.</u> (currently amended) The system of claim 1, wherein multiple transponders are used such that at least one of the transponders is used as a reference point.

[[124.]] <u>125.</u> (currently amended) The system of claim 1, wherein multiple transceivers are used such that at least one of the transceivers is used as a reference point.

[[125.]] <u>126.</u> (currently amended) The system of claim 1, wherein multiple transponders are used such that at least one of the transponders is used as a reference point.

[[126.]] <u>127.</u> (currently amended) The system of claim 1, wherein the transceiver receives an input for determining its own position in real time.

[[127.]] 128. (currently amended) The system claim 1, wherein the transceiver includes a device for determining its absolute position.

[[128.]] 129. (currently amended) The system claim [[129]] 128, wherein the device is a GPS receiver.

[[129.]] 130. (currently amended) The system claim 1, wherein the transceiver includes a device for determining its direction of movement.

[[130.]] 131. (currently amended) The system claim [[131]] 130, wherein the device is a compass.

[[131.]] 132. (currently amended) The system of claim 1, wherein the processor determines the virtual triangulation based on successive values of the position information with minimal interaction with a user of the transceiver.

[[132.]] 133. (currently amended) The system of claim 1, wherein the virtual triangulation uses an average speed of a motion of the transceiver.

[[133.]] 134. (currently amended) The system of claim 1, wherein the virtual triangulation relies on a Point Search technique.

[[134.]] 135. (currently amended) The system of claim 1, wherein the virtual triangulation relies on a successive pattern movement.

[[135.]] 136. (currently amended) The system of claim 1, wherein the virtual triangulation relies on a successive pattern movement with minimal user unit interaction.